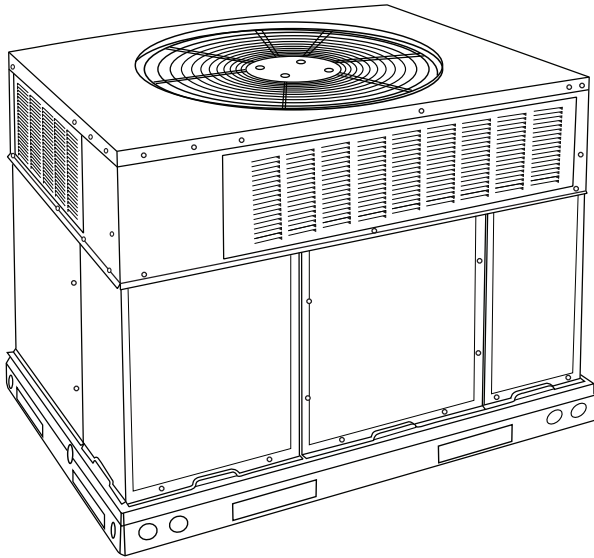


**50GL-A
Single-Packaged 50Hz, CE Air Conditioner System
with Puron® (R-410A) Refrigerant
7-14 kW (24-48)**



Turn to the Experts.™

Product Data



A09042

Fig. 1 - Unit 50GL-A

Single-Packaged Products with Energy-Saving Features and Puron® refrigerant.

- 7-14 kW
- Multi-Speed High Efficiency Blower-Standard
- Low Sound Levels

FEATURES/BENEFITS

One-piece cooling unit with optional electric heater, low sound levels, easy installation, low maintenance, and dependable performance.

Puron Environmentally Sound Refrigerant is Carrier's unique refrigerant designed to help protect the environment. Puron is an HFC refrigerant which does not contain chlorine that can harm the ozone layer. Puron refrigerant is in service in millions of systems proving highly reliable, environmentally sound performance.

Easy Installation

Factory-assembled package is a compact, fully self-contained, electric cooling unit that is prewired, pre-piped, and pre-charged for minimum installation expense. These units are available in a variety of standard cooling sizes with voltage options to meet residential and light commercial requirements. Units are lightweight and install easily on a rooftop or at ground level. The high tech composite base eliminates rust problems associated with ground level applications.

Innovative Unit Base Design

On the inside a high-tech composite material will not rust and incorporates a sloped drain pan which improves drainage and helps inhibit mold, algae and bacterial growth. On the outside metal base rails provide added stability as well as easier handling and rigging.

Convertible duct configuration

Unit is designed for use in either downflow or horizontal applications. Each unit can be converted from horizontal to

downflow and includes horizontal duct covers. Downflow operation is provided in the field to allow vertical ductwork connections. The basepan seals on the bottom openings to ensure a positive seal in the vertical airflow mode.

Efficient operation High-efficiency design offers capacities of 7 to 14 kW. (See page 4.)

Durable, dependable components

Scroll Compressors are designed for high efficiency. Each compressor is hermetically sealed against contamination to help promote longer life and dependable operation. Each compressor also has vibration isolation to provide quieter operation. All compressors have internal high pressure and overcurrent protection.

ECM Motor is standard on all 50GL-A models.

Direct-drive PSC (Permanent Split Capacitor) condenser-fan motors are designed to help reduce energy consumption and provide for cooling operation down to 40°F (4.4°C) outdoor temperature. Motormaster® II low ambient kit is available as a field-installed accessory.

Refrigerant system is designed to provide dependability. Liquid filter driers are used to promote clean, unrestricted operation. Each unit leaves the factory with a full refrigerant charge. Refrigerant service connections make checking operating pressures easier.

High and Low Pressure Switches provide added reliability for the compressor.

Indoor and Outdoor coils are computer-designed for optimum heat transfer and efficiency. The indoor coil is fabricated from copper tube and aluminum fins and is located inside the unit for protection against damage. The outdoor coil is internally mounted on the top tier of the unit.

Low sound ratings ensure a quiet indoor and outdoor environment with sound ratings as low as 75dBA. (See Page 4.)

Easy to service cabinets provide easy 3 panel accessibility to serviceable components during maintenance and installation. The basepan with integrated drain pan provides easy ground level installation with a mounting pad. A nesting feature ensures a positive basepan to roof curb seal when the unit is roof mounted. A convenient 3/4-in. (19.1 mm) wide perimeter flange makes frame mounting on a rooftop easy.

Standard horizontal metal duct covers with insulation come with the unit and cover the horizontal duct openings. These can be left in place if the units are converted to downflow.

Cabinets are constructed of heavy duty, phosphated, zinc-coated prepainted steel capable of withstanding 500 hours in salt spray. Interior surfaces of the evaporator/heat exchanger compartment are insulated with cleanable semi-rigid insulation board, which keeps the conditioned air from being affected by the outdoor ambient temperature and provides improved indoor air quality. (Conforms to American Society of Heating, Refrigeration and Air Conditioning Engineers No. 62P.) The sloped drain pan minimizes standing water in the drain. An external drain is provided.

TABLE OF CONTENTS

FEATURES/BENEFITS 1

MODEL NUMBER NOMENCLATURE 2

CAPACITIES 3

PHYSICAL DATA 4

OPTIONS AND ACCESSORIES 5

BASE UNIT DIMENSIONS 6-7

ACCESSORY ROOF CURB 8

SELECTION PROCEDURE 9

PERFORMANCE DATA 10-16

TYPICAL PIPING AND WIRING 17

APPLICATION DATA 17

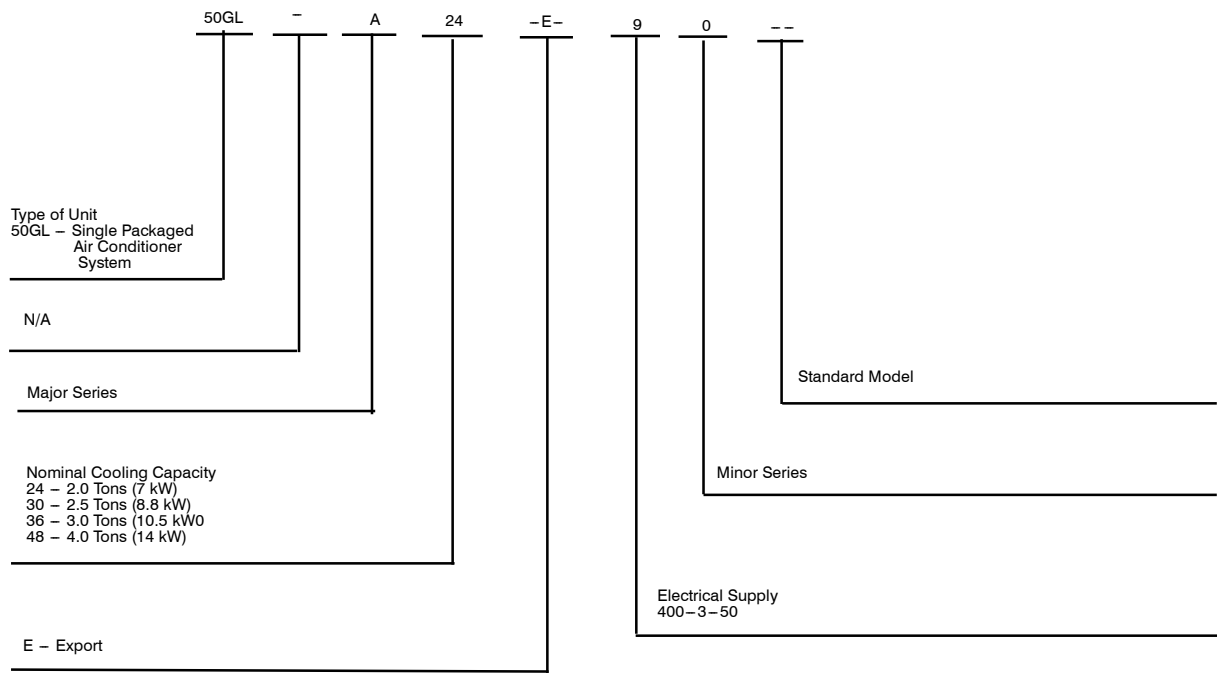
ELECTRICAL DATA 18

TYPICAL WIRING SCHEMATICS 19

CONTROLS 20

GUIDE SPECIFICATIONS 21-22

MODEL NUMBER NOMENCLATURE



Cooling Capacities and Efficiencies

50GL-A	NET COOLING CAPACITIES (kW)	STANDARD CFM/ L/s	NET COOLING CAPACITY (Btuh)	EER	kW
24	6.9	800/378	23400	9.5	6.9
30	8.6	1000/472	29200	9.5	8.6
36	10.7	1200/567	36700	9.5	10.7
48	14.4	1600/756	49300	9.2	14.4

LEGEND

dB—Sound Levels (decibels)

db—Dry Bulb

wb—Wet Bulb

† Tested in accordance with U.S. Government DOE Department of Energy) test procedures and/or AHRI Standards 210/240—2008.

Notes:

1. Ratings are net values, reflecting the effects of circulating fan heat.

Ratings are based on:

Cooling Standard: 80°F (26.7°C) db, 67°F wb (19.4°C) indoor entering—air temperature and 95°F db (35°C) outdoor entering—air temperature.

2. Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

A-WEIGHTED SOUND POWER LEVEL (dBA)

MODEL 50GL-A	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (dBA) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
24	75	60.4	58.3	64.8	66.9	64.3	59.8	51.8
30	75	58.2	59.2	65.8	67.7	64.8	61.8	53.6
36	75	60.4	61.6	66.9	67.8	64.6	60.7	52.8
48	78	65.2	69.7	72.7	72.9	69.8	65.8	57.9

NOTE: Tested in accordance with AHRI Standard 270 (not listed in AHRI).

50GL--A

PHYSICAL DATA

UNIT SIZE	24	30	36	48
NOMINAL CAPACITY (ton)	2	2-1/2	3	4
SHIPPING WEIGHT lb.	287	319	325	377
SHIPPING WEIGHT (kg)	130.0	144.7	147.4	171.0
COMPRESSORS	Scroll			
Quantity	1			
REFRIGERANT (R-410A)				
Quantity lb	4.25	6.0	7.25	9.75
Quantity (kg)	1.9	2.7	3.3	4.4
REFRIGERANT METERING DEVICE	AccuRater			
OUTDOOR COIL				
Rows...Fins/in.	1...17	1...17	2...17	2...17
Rows...Fins/cm	1...6.7	1...6.7	2...6.7	2...6.7
Face Area (sq ft)	10.9	12.7	9.1	12.3
Face Area (sq m)	1	1.18	0.85	1.14
OUTDOOR FAN				
Nominal Cfm	2350	2350	2350	3300
Nominal L/s	1109	1109	1109	1557
Diameter in.	22	22	22	22
Diameter (mm)	559	559	559	559
Motor Hp (Rpm)	1/4 (900)	1/4 (900)	1/4 (900)	1/3 (1340)
Motor Hp (kW)	186	373	373	248
INDOOR COIL				
Rows...Fins/in.	3...15	3...15	3...15	4...15
Rows...Fins/cm	3...5.9	3...5.9	3...5.9	4...5.9
Face Area (sq ft)	3.7	3.7	3.7	4.7
Face Area (sq m)	0.34	0.34	0.34	0.44
INDOOR BLOWER				
Nominal Cooling Airflow (Cfm)	800	1000	1200	1600
Nominal Cooling Airflow (L/s)	378	472	566	756
Wheel Size in.	10x10	10x10	10x10	11x10
Wheel Size (cm)	25.4x25.4	25.4x25.4	25.4x25.4	27.9x25.4
Motor HP	1/4	1/2	1/2	1
Motor (kW)	186	373	373	746
HIGH - PRESSURE SWITCH				
Cut-out psig	650			
Reset psig	420			
Cut-out kPa	4482			
Reset kPa	2896			
LOW - PRESSURE SWITCH				
Cut-out psig	20			
Reset psig	45			
Cut-out kPa	138			
Reset kPa	310			
RETURN - AIR FILTERS†‡				
Throwaway Size in.	20x20x1	20x24x1	24x30x1	24x36x1
Throwaway Size (mm)	508x508x25	508x610x25	610x762x25	610x914x25

† Required filter sizes shown are based on the larger of the AHRI (Air Conditioning, Heating and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for throwaway type or 450 ft/minute for high-capacity type. Air filter pressure drop for non-standard filters must not exceed 0.08 IN. W.C.

‡ If using accessory filter rack refer to the filter rack installation instructions for correct filter sizes and quantity.

OPTIONS AND ACCESSORIES

ITEM	DESCRIPTION	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
Coil Options	Base unit with tin plated indoor coil hairpins	X	
Corporate Thermostats	Thermostats provide control for the system heating and cooling functions.		X
Crankcase Heater	Crankcase Heater provides anti-floodback protection for low-load cooling applications.		X*
Electric Heaters	Electric Heat Supplement		X
Filter Rack	Filter Rack features easy installation, serviceability, and high-filtering performance for vertical applications. Includes 1-in. filter.		X
Flat Roof Curbs	Flat Roof Curbs in both 11-in (279 mm) and 14-in. (356 mm) sizes are available for roof mounted applications.		X
Low Ambient Kit	Low Ambient Kit (Motormaster II Control) allows the use of mechanical cooling down to outdoor temperatures as low as 0°F (-18° C) when properly installed.		X
Manual Outside Air Damper	Manual Outside Air Damper includes hood and filter rack with adjustable damper blade for up to 25% outdoor air.		X
Square-to-Round Duct Transition Kit	Square-to-Round Duct Transition Kit enable 24-48 size units to be fitted to 14 in (356 mm). round ductwork.		X
Time Guard II	Automatically prevents the compressor from restarting for at least 4 minutes and 45 seconds after shutdown of the compressor. Not required when a corporate programmable thermostat is applied.		X

*Refer to Price Page for application detail.

Electric Heaters

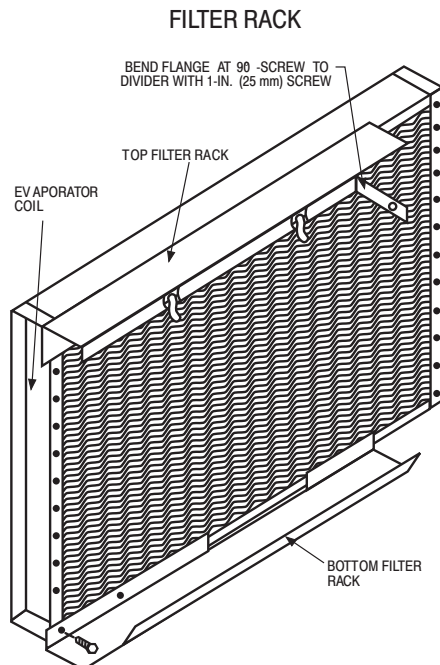
CATALOG ORDERING NO.	NOMINAL CAPACITY (kW)	FUSED (Yes/No)	STAGES	USED WITH SIZES			
				24	30	36	48
CPHEATER076A00	6.5	No	1	X	X	X	X
CPHEATER077A00	8.7	No	1	X	X	X	X
CPHEATER078A00	13.0	No	1		X	X	X
CPHEATER079A00	17.4	No	1				X

NOTE: Electric heaters are rated at 400v. Refer to Multiplication Factors table for other voltages.

X = Approved combinations.

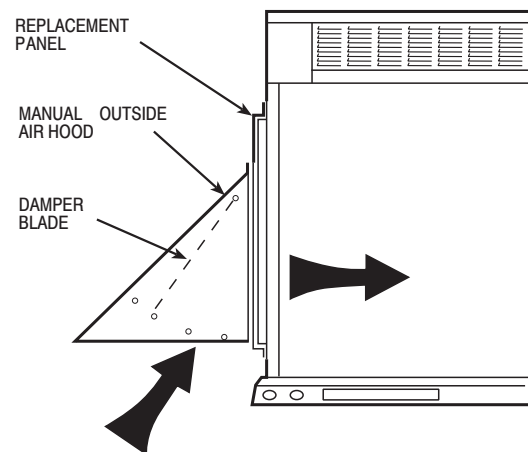
Minimum Airflow for Safe Electric Heater Operation (CFM)

SIZE	24	30	36	48
Cfm	800	1000	1200	1600
L/s	378	472	567	756



A09236

MANUAL OUTSIDE AIR DAMPER



A09235

50GL--A

UNIT DIMENSIONS - 50GL-A24-36

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT. LB KG	UNIT HEIGHT "A" IN	CENTER OF GRAVITY IN/MM		
				X	Y	Z
50GL-A24-E-90	400-3-50	280	127.0	40	1016	
50GL-A30-E-90	400-3-50	312	141.5	42	1067	406
50GL-A36-E-90	400-3-50	318	144.2	38	965	419

REQUIRED CLEARANCES TO COMBUSTIBLE MATL.

UNITS	CORNER WEIGHT LB/KG		
	-1" IN	-2" IN	-4" IN
50GL-A24-E-90	80	36	53
50GL-A30-E-90	88	40	64
50GL-A36-E-90	89	40	64

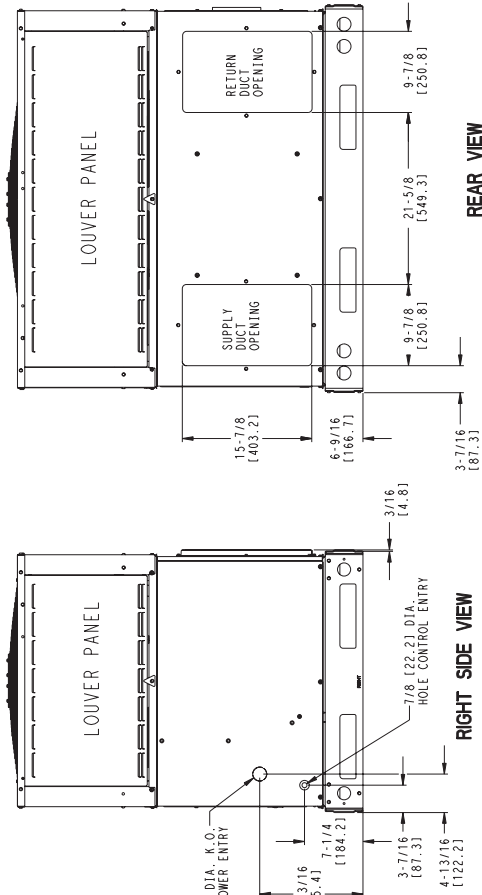
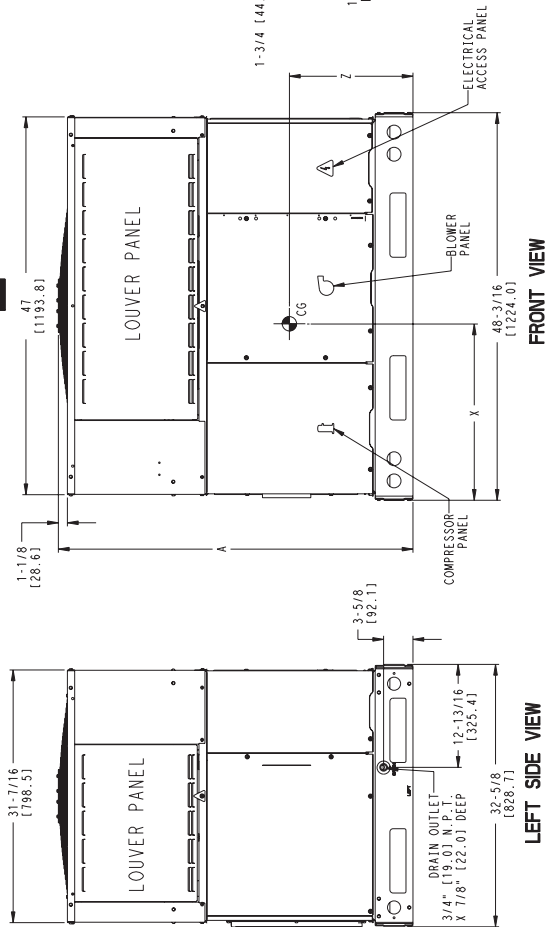
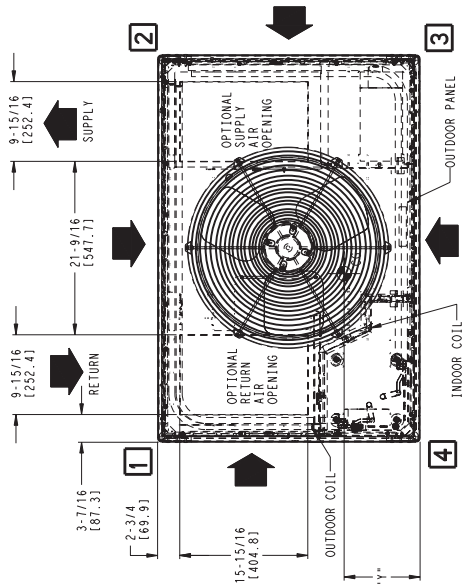
INCHES (MM)
TOP OF UNIT.....14 (355.6)
DUCT SIDE OF UNIT.....12 (304.8)
SIDE OPPOSITE DUCTS.....14 (355.6)
50GL-A30-E-90.....14 (355.6)
ELECTRICAL PANEL.....36 (914.4)
NEC. REQUIRED CLEARANCES.

INCHES (MM)
BETWEEN UNITS, POWER ENTRY SIDE.....42 (1066.8)
UNIT AND BLOWER ACCESS.....36 (914.0)
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER
GROUND SURFACES, POWER ENTRY SIDE.....42 (1066.8)
REQUIRED CLEARANCE FOR OPERATION AND SERVICING

INCHES (MM)
EVAP. COIL ACCESS SIDE.....36 (914.0)
POWER ENTRY SIDE.....42 (1066.8)
(EXCEPT FOR NEC REQUIREMENTS)
UNIT TOP.....48 (1219.2)
SIDE OPPOSITE DUCTS.....36 (914.0)
DUCT PANEL.....12 (304.8)*

*MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 (304.8) FROM WALL
SYSTEM, THEN SYSTEM PERFORMANCE MAYBE COMPROMISED.

DIMENSIONS IN () ARE IN MILLIMETERS



REV	50ES500441
3.0	

UNIT DIMENSIONS - 50GL-A48

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT "A"	CENTER OF GRAVITY IN/MM						
		LB	KG		X		Y		Z		
50GL-A48-E-90	400-3-50	368	166.9	42	1067	19-1/2	495	17-5/8	448	18	457

REQUIRED CLEARANCES TO COMBUSTIBLE MATL.

CORNER WEIGHT LB/KG		INCHES [MM]	
"1"	"2"	"3"	"4"
83	38	61	28
50GL-A48-E-90		TOP OF UNIT.....14 [355.6]	
		DUCT SIDE OF UNIT.....2 [50.8]	
		SIDE OPPOSITE DUCTS.....14 [355.6]	
		BOTTOM OF UNIT.....0 [0.0]	
		ELECTRICAL PANEL.....36 [914.4]	

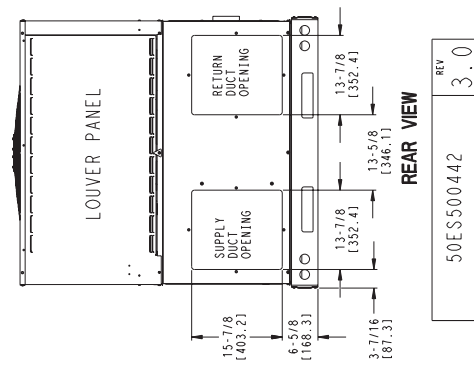
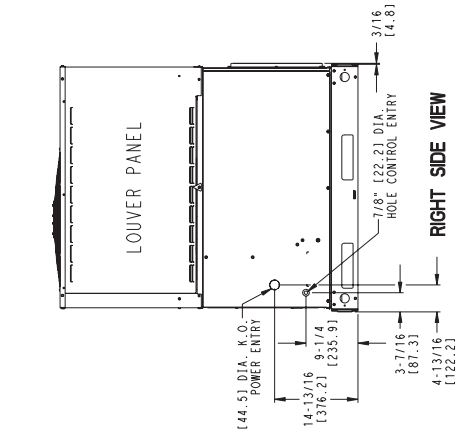
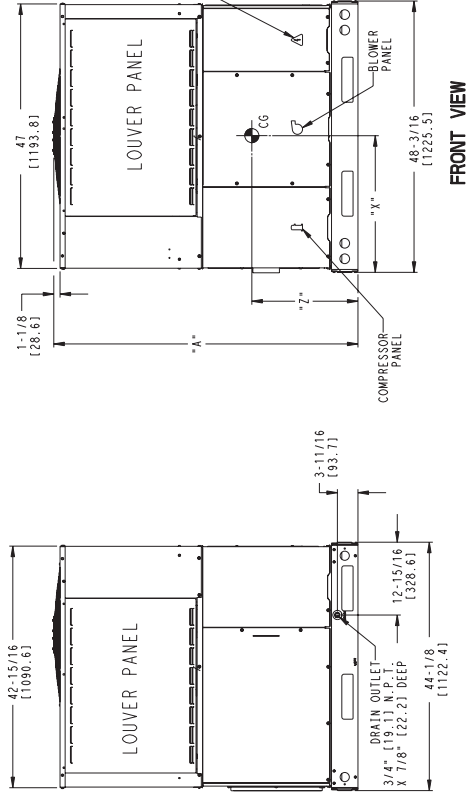
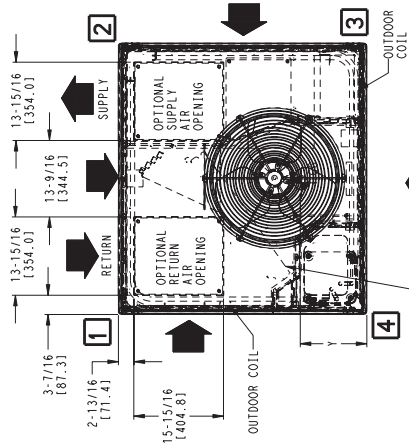
NEC. REQUIRED CLEARANCES.

INCHES [MM]	
BETWEEN UNITS, POWER ENTRY SIDE	
UNIT AND UNGROUNDED SURFACES, POWER ENTRY SIDE	
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE	
REQUIRED CLEARANCE FOR OPERATION AND SERVICING	
EVAP. COIL ACCESS SIDE	
POWER ENTRY SIDE	
(EXCEPT FOR NEC REQUIREMENTS)	
DUCT SIDE OF UNIT	
SIDE OPPOSITE DUCTS	
DUCT PANEL	

INCHES [MM]	
EVAP. COIL ACCESS SIDE	
POWER ENTRY SIDE	
(EXCEPT FOR NEC REQUIREMENTS)	
DUCT SIDE OF UNIT	
SIDE OPPOSITE DUCTS	
DUCT PANEL	

*MINIMUM DISTANCES IF UNIT IS PLACED LESS THAN 12 (304.8) FROM WALL SYSTEM, THEN SYSTEM PERFORMANCE MAY BE COMPROMISED.

DIMENSIONS IN [] ARE IN MILLIMETERS

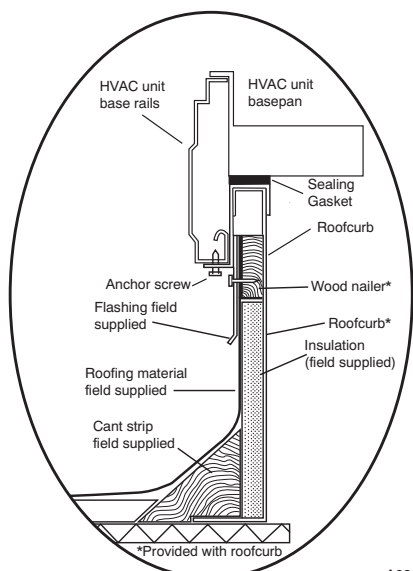


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50GL--A

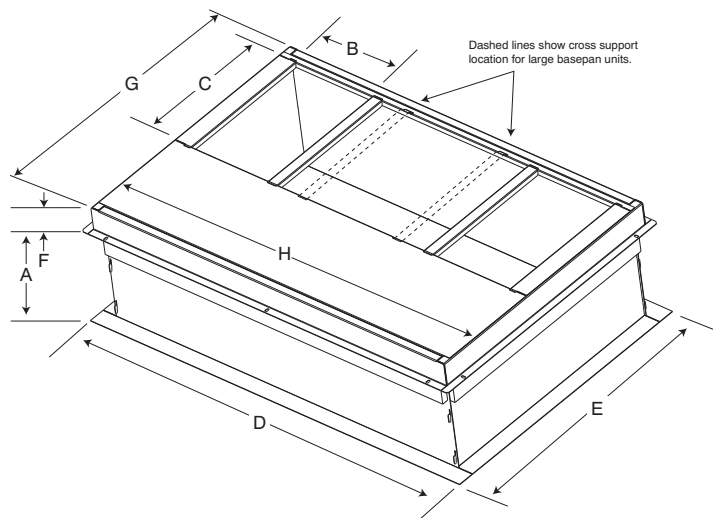
ACCESSORY ROOF CURB - 50GL-A24-48

50GL--A



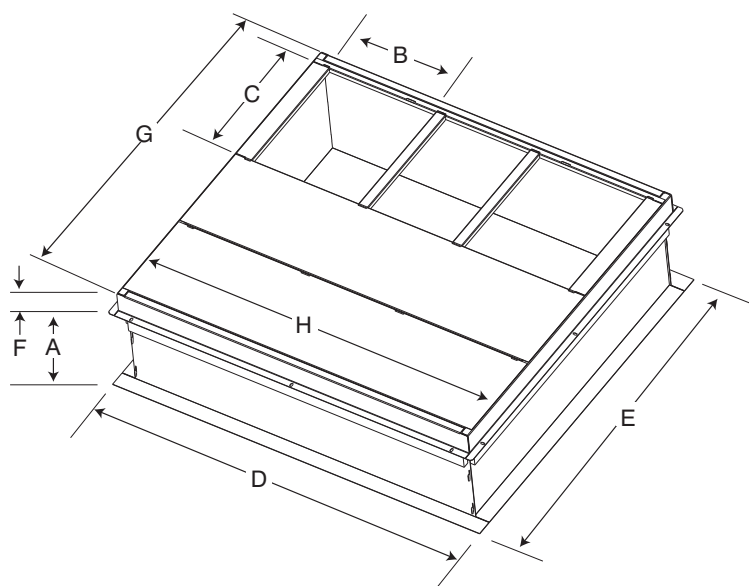
A09090

ROOF CURB DETAIL



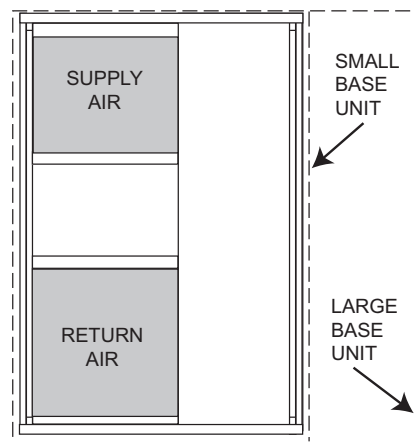
A09413

SMALL/COMMON CURB



A09415

LARGE CURB



A09094

UNIT PLACEMENT ON
COMMON CURB

SMALL OR LARGE BASE UNIT

A09414

UNIT SIZE	CATALOG NUMBER	A IN. (mm)	B (small/common curb) IN. (mm)*	B (large curb) IN. (mm)*	C IN. (mm)	D IN. (mm)	E IN. (mm)	F IN. (mm)	G IN. (mm)	H IN. (mm)
Small or Large	CPRFCURB010A00	11 (279)	10 (254)	14 (356)	16 (406)	47.8 (1214)	32.4 (822)	2.7 (69)	30.6 (778)	46.1 (1170)
	CPRFCURB011A00	14 (356)					43.9 (1116)			
Large	CPRFCURB012A00	11 (279)	14 (356)	14 (356)	16 (406)	47.8 (1214)	43.9 (1116)	2.7 (69)	42.2 (1072)	46.1 (1170)
	CPRFCURB013A00	14 (356)					43.9 (1116)			

* Part Numbers CPRFCURB010A00 and CPRFCURB011A00 can be used on both small and large basepan units. The cross supports must be located based on whether the unit is a small basepan or a large basepan.

NOTES:

1. Roof curb must be set up for unit being installed.
2. Seal strip must be applied, as required, to unit being installed.
3. Roof curb is made of 16-gauge steel.
4. Attach ductwork to curb (flanges of duct rest on curb).
5. Insulated panels: 1-in. (25.4 mm) thick fiberglass 1 lb. density.

SELECTION PROCEDURE (WITH EXAMPLE)

1. Determine cooling and heating requirements at design conditions:

Given:

Required Cooling Capacity (TC) . . . 10.4kW (35,000 Btuh)
Sensible Heat Capacity (SHC) 7.3 kW (25,000 Btuh)
Required Heating Capacity 6.4 kW (22,000 Btuh)
Condenser Entering Air Temperature 35°C (95°F)
Indoor-Air Temperature 26.7°C (80°F) edb
. 19°C (67°F) ewb
Evaporator Air Quantity 543 L/s (1150 CFM)
External Static Pressure 24.9 Pa (0.1 IN. W.C.)
Electrical Characteristics 400-3-50

2. Select unit based on required cooling capacity.

A. SI

Enter Net Cooling Capacities SI table at condenser entering temperature of 35°C, which matches design Condenser Entering Air Temperature. At 566 L/s and 19°C ewb (entering wet bulb) will provide a total capacity of 12.5 kW and a SHC of 9.1 kW. Calculate SHC correction, if required using Note 3 of Net Cooling Capacities Table.

3. Select electric heat.

The required heating capacity is 6.4 kW (22,000 Btuh)-(given).

Determine additional electric heat capacity in kW.

$$\frac{22,000 \text{ Btuh}}{3,414 \text{ Btuh/kW}} = 6.44 \text{ kW of heat required}$$

Enter the Electric Heater table for the unit. The 6.5 kW heater at 400v most closely satisfies the heating required.

4. Determine fan speed and power requirements at design conditions.

Before entering the air delivery tables, calculate the total static pressure required. From the given Filter Pressure Drop Table find:

External Static Pressure	12.5 Pa (0.05 IN. W.C.)
Filter	<u>+20/0 Pa (0.12 IN. W.C.)</u>
Total Static Pressure	42.4 Pa (0.17 IN. W.C.)

Enter the table for Wet Coil Air Delivery—Horizontal Discharge, 400 V. At 0.424 Pa (0.17 IN. W.C.) external static pressure and low speed, the fan will deliver 561 L/s (1188 CFM).

PERFORMANCE DATA

50GL-A24

50GL-A24 COOLING PERFORMANCE TABLE - SI		Evaporator Air—L/s—BF											
Temp (°C) Outdoor Air Entering Condenser		330/0.034						377/0.043					
		Evaporator Air—Ewb (°C)						425/0.51					
		17	19	22	22	17	19	22	17	19	22	17	22
24	TC	6.8	7.6	8.2	8.2	6.9	7.7	8.2	7.1	7.7	8.2	7.1	8.2
	SHC	6.0	5.0	4.0	4.0	6.4	5.3	4.0	6.8	5.4	4.1	6.8	4.1
	KW	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.1
29	TC	6.4	7.2	7.9	7.9	6.5	7.3	7.9	6.8	7.4	7.9	6.8	7.9
	SHC	5.8	4.9	3.9	3.9	6.2	5.1	4.0	6.5	5.4	4.0	6.5	4.0
	KW	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.3
35	TC	6.0	6.8	7.5	7.5	6.2	6.9	7.6	6.4	6.9	7.6	6.4	7.6
	SHC	5.6	4.7	3.8	3.8	5.9	5.0	3.9	6.1	5.2	3.9	6.1	3.9
	KW	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.4	2.5
41	TC	5.6	6.3	7.1	7.1	5.9	6.4	7.2	6.1	6.5	7.2	6.1	7.2
	SHC	5.4	4.5	3.6	3.6	5.6	4.8	3.7	5.8	5.1	3.8	5.8	3.8
	KW	2.4	2.6	2.6	2.6	2.5	2.7	2.7	2.6	2.7	2.8	2.6	2.8
46	TC	5.3	5.8	6.6	6.6	5.5	5.9	6.7	5.7	6.0	6.7	5.7	6.7
	SHC	5.1	4.3	3.4	3.4	5.3	4.6	3.6	5.4	4.9	3.6	5.4	3.6
	KW	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	2.9	3.0
52	TC	4.9	5.4	6.1	6.1	5.1	5.4	6.1	5.3	5.5	6.1	5.3	6.1
	SHC	4.7	4.1	3.2	3.2	4.9	4.4	3.4	5.1	4.7	3.5	5.1	3.5
	KW	2.9	3.0	3.1	3.1	3.0	3.2	3.2	3.2	3.3	3.3	3.2	3.3

See Legend and Notes on Page 15.

PERFORMANCE DATA (CONT)

50GL-A30

50GL-A30 COOLING PERFORMANCE TABLE - SI														
Temp (°C) Outdoor Air Entering Condenser		413/0.047					472/0.061					531/0.074		
		Evaporator Air—L/s—BF					Evaporator Air—L/s—BF					Evaporator Air—L/s—BF		
		413/0.047					472/0.061					531/0.074		
24	TC	17	19	22	17	19	22	17	19	22	17	19	22	22
		8.5	9.3	10.2	8.6	9.4	10.3	8.8	9.4	10.4	8.8	9.4	10.4	10.4
		7.5	6.2	5.0	8.0	6.6	5.2	8.4	6.9	5.3	8.4	6.9	5.3	5.3
29	kW	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.8	2.6	2.7	2.8	2.8
		8.1	8.9	9.8	8.2	9.0	9.9	8.5	9.0	9.9	8.5	9.0	9.9	9.9
		7.3	6.1	4.8	7.8	6.4	5.0	8.1	6.7	5.2	8.1	6.7	5.2	5.2
35	TC	2.7	2.7	2.8	2.8	2.8	2.9	2.8	3.0	3.0	2.8	3.0	3.0	3.0
		7.7	8.5	9.3	7.9	8.5	9.4	8.1	8.6	9.4	8.1	8.6	9.4	9.4
		7.1	5.9	4.7	7.6	6.2	4.9	7.8	6.6	5.0	7.8	6.6	5.0	5.0
41	kW	3.0	3.0	3.0	3.0	3.1	3.2	3.1	3.2	3.3	3.1	3.2	3.3	3.3
		7.4	8.0	8.9	7.6	8.1	8.9	7.8	8.1	8.9	7.8	8.1	8.9	8.9
		6.9	5.7	4.5	7.2	6.1	4.7	7.4	6.4	4.8	7.4	6.4	4.8	4.8
46	TC	3.3	3.3	3.4	3.3	3.4	3.5	3.4	3.6	3.6	3.4	3.6	3.6	3.6
		7.0	7.6	8.4	7.2	7.7	8.4	7.4	7.7	8.4	7.4	7.7	8.4	8.4
		6.7	5.6	4.3	6.9	5.9	4.5	7.1	6.2	4.7	7.1	6.2	4.7	4.7
52	kW	3.6	3.7	3.7	3.7	3.8	3.8	3.8	3.9	4.0	3.8	3.9	4.0	4.0
		6.7	7.2	8.0	6.9	7.2	8.0	7.0	7.3	8.0	7.0	7.3	8.0	8.0
		6.4	5.4	4.2	6.6	5.8	4.4	6.7	6.1	4.5	6.7	6.1	4.5	4.5
52	kW	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.4	4.2	4.3	4.4	4.4

See Legend and Notes on Page 15.

PERFORMANCE DATA (CONT)

50GL-A36

50GL-A36 COOLING PERFORMANCE TABLE - SI													
Temp (°C) Outdoor Air Entering Condenser		496/0.073				566/0.091				637/0.11			
		Evaporator Air—L/s—BF				Evaporator Air—Ewb (°C)							
		17	19	22	22	17	19	22	22	17	19	22	22
24	TC	10.5	11.6	12.3	12.3	10.8	11.7	12.3	12.3	10.9	11.8	12.3	12.3
	SHC	9.3	7.8	6.2	6.2	9.8	8.1	6.3	6.3	10.3	8.4	6.4	6.4
	KW	3.0	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.3
29	TC	10.1	11.1	12.0	12.0	10.3	11.3	12.1	12.1	10.5	11.3	12.1	12.1
	SHC	9.1	7.6	6.1	6.1	9.6	8.0	6.2	6.2	10.1	8.3	6.3	6.3
	KW	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.6	3.7	3.7	3.7
35	TC	9.6	10.6	11.6	11.6	9.8	10.7	11.6	11.6	9.9	10.8	11.6	11.6
	SHC	8.9	7.4	5.9	5.9	9.4	7.8	6.1	6.1	9.9	8.1	6.1	6.1
	KW	3.6	3.7	3.7	3.7	3.8	3.9	3.9	3.9	3.9	4.0	4.0	4.0
41	TC	9.1	10.1	11.0	11.0	9.3	10.2	11.1	11.1	9.6	10.2	11.1	11.1
	SHC	8.7	7.2	5.7	5.7	9.1	7.6	5.9	5.9	9.5	7.9	6.0	6.0
	KW	4.0	4.1	4.1	4.1	4.1	4.3	4.3	4.3	4.2	4.4	4.4	4.4
46	TC	8.6	9.5	10.4	10.4	8.8	9.6	10.4	10.4	9.1	9.6	10.3	10.3
	SHC	8.3	6.9	5.5	5.5	8.8	7.3	5.6	5.6	9.1	7.6	5.7	5.7
	KW	4.4	4.5	4.5	4.5	4.5	4.7	4.7	4.7	4.7	4.8	4.8	4.8
52	TC	8.1	8.8	9.6	9.6	9.5	8.9	9.6	9.6	8.5	8.9	9.5	9.5
	SHC	8.0	6.7	5.2	5.2	5.3	7.0	5.3	5.3	8.5	7.4	5.3	5.3
	KW	4.9	5.0	5.0	5.0	5.3	5.1	5.1	5.1	5.1	5.2	5.3	5.3

See Legend and Notes on Page 15.

PERFORMANCE DATA (CONT)

50GL-A48

50GL-A48 COOLING PERFORMANCE TABLE - SI												
Temp (°C) Outdoor Air Entering Condenser		661/0.024			755/0.031			850/0.038				
		Evaporator Air—L/s—BF			Evaporator Air—Ewb (°C)							
		17	19	22	17	19	22	17	19	22	17	22
24	TC	13.9	15.4	16.5	14.5	15.7	16.7	14.8	16.0	16.8		
	SHC	12.5	10.3	8.0	13.5	10.9	8.3	14.5	11.5	8.6		
	KW	4.4	4.4	4.5	4.4	4.5	4.5	4.4	4.5	4.5		
29	TC	13.2	14.8	16.0	13.7	15.2	16.3	14.1	15.5	16.5		
	SHC	12.1	10.1	7.9	13.1	10.9	8.3	14.1	11.5	8.6		
	KW	4.8	4.9	4.9	4.8	4.9	5.0	4.8	4.9	5.0		
35	TC	12.5	14.1	15.5	12.9	14.4	15.8	13.4	14.7	16.0		
	SHC	11.7	9.8	7.7	12.7	10.6	8.1	13.4	11.3	8.5		
	KW	5.2	5.3	5.4	5.3	5.3	5.4	5.3	5.4	5.5		
41	TC	11.7	13.2	14.8	12.2	13.6	15.1	12.8	13.9	15.3		
	SHC	11.4	9.5	7.5	12.2	10.3	7.9	12.8	11.0	8.3		
	KW	5.7	5.9	5.9	5.8	5.9	5.9	5.8	5.9	6.0		
46	TC	10.8	12.1	13.8	11.4	12.5	14.1	11.9	12.7	14.4		
	SHC	10.8	9.0	7.1	11.4	9.8	7.6	11.9	10.5	8.0		
	KW	6.4	6.5	6.6	6.5	6.6	6.7	6.5	6.6	6.7		

See Legend and Notes on Page 15.

PERFORMANCE DATA (CONT)

LEGEND

- BF— Bypass Factor
- edb— Entering Dry—Bulb
- Ewb— Entering Wet—Bulb
- kW — Total Unit Power Input
- SHC— Sensible Heat Capacity (1000 Btuh)
- TC — Total Capacity (1000 Btuh) (net)

COOLING NOTES:

- 1. Ratings are net; they account for the effects of the evaporator—fan motor power and heat.
- 2. Direct interpolation is permissible. Do not extrapolate.
- 3. The following formulas may be used:

$$C_{db} = C_{edb} - \frac{SHC}{1.23} \times \frac{kW \times 1000}{L/s}$$

Leaving wet bulb = wet bulb temperature corresponding to enthalpy of air leaving coil (h_{wb}).

$$h_{wb} = h_{ewb} - \frac{TC}{1.20} \times \frac{kW \times 1000}{L/s}$$

Where h_{ewb} is enthalpy of air entering indoor coil.

SHC is based on 26.7 C db temperature of air entering the unit. At any other temperature, correct the SHC read from the table of cooling capacities as follows:

$$\text{Corrected SHC}_{kW} = SHC + [1.23 \times 10^{-3} \times (1 - BF) \times (C_{db} - 26.7) \times L/s]$$

Above 26.7 C, SHC correction is positive; add it to SHC. Below 26.7 C, SHC correction is negative; subtract it from SHC.

PERFORMANCE DATA (CONT)

Electric Heater Multiplication Factors

HEATER KW RATING	VOLTAGE DISTRIBUTION V/3/60	MULTIPLICATION FACTOR
400	380	.90
	400	1.00
	415	1.08
	420	1.10

Example: 12.1 kW (at 400 v) heater on 380 v

= 12.1 (.90 multiplication factor)

= 10.9 kW capacity at 380 v

NOTE: Heater kW rating is voltage as marked on the base unit nameplate. Voltage distribution is the design power supply at installation site.

Wet Coil Air Delivery Horizontal and Downflow Discharge* 50GL (50 Hz) 24-48 (English)

400 VOLT												
UNIT	MOTOR SPEED	EXTERNAL STATIC PRESSURE (IN. W.C)										
		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
50GL – A24	Low	Watts	303	305	306	300	–	–	–	–	–	–
		Cfm	969	879	785	687	–	–	–	–	–	–
	High	Watts	–	–	–	–	435	428	428	422	–	–
		Cfm	–	–	–	–	963	833	758	676	–	–
50GL – A30	Low	Watts	–	1002	954	921	889	853	814	–	–	–
		Cfm	–	1189	1115	1041	971	903	833	–	–	–
	High	Watts	–	–	–	–	–	–	700	683	688	755
		Cfm	–	–	–	–	–	–	1223	1142	1075	1058
50GL – A36	Low	Watts	552	540	529	523	514	480	–	–	–	–
		Cfm	1296	1237	1167	1097	1029	952	–	–	–	–
	High	Watts	–	–	–	–	–	782	765	736	721	780
		Cfm	–	–	–	–	–	1467	1398	1321	1237	1165
50GL – A48	Low	Watts	692	686	678	664	652	664	736	–	–	–
		Cfm	1571	1509	1444	1370	1295	1240	1237	–	–	–
	High	Watts	–	–	1112	930	856	834	825	811	793	–
		Cfm	–	–	1693	1670	1601	1521	1447	1378	1294	–

*Air delivery values are based on operating voltage of 400–v, wet coil, without filter or electric heater. Deduct filter and electric heater pressure drops to obtain static pressure available for ducting.

NOTES: 1. Do not operate the unit at a cooling airflow that is less than 350 cfm for each 12,000 Btuh (165 L/s for each 3.5 kW) of rated cooling capacity. Evaporator coil frosting may occur at airflow below this point.

2. Dashes indicate portions of table that are beyond the blower motor capacity or are not recommended.

Wet Coil Air Delivery Horizontal and Downflow Discharge* 50GL (50 Hz) 24-48 (SI)

400 VOLT												
UNIT	MOTOR SPEED	EXTERNAL STATIC PRESSURE (Pa)										
		0	25	50	75	100	125	150	175	200	225	250
50GL – A24	Low	Watts	303	305	303	300	–	–	–	–	–	–
		L/s	458	415	371	324	–	–	–	–	–	–
	High	Watts	–	–	–	–	435	428	428	422	–	–
		L/s	–	–	–	–	455	393	358	319	–	–
50GL – A30	Low	Watts	–	1002	954	921	889	853	814	–	–	–
		L/s	–	561	526	491	458	426	393	–	–	–
	High	Watts	–	–	–	–	–	–	700	683	688	755
		L/s	–	–	–	–	–	–	577	539	508	499
50GL – A36	Low	Watts	552	540	529	523	514	480	–	–	–	–
		L/s	612	584	551	518	486	449	–	–	–	–
	High	Watts	–	–	–	–	–	782	765	736	721	780
		L/s	–	–	–	–	–	693	660	624	584	550
50GL – A48	Low	Watts	692	686	678	664	652	664	736	–	–	–
		L/s	741	712	681	647	611	585	584	–	–	–
	High	Watts	–	–	1112	930	856	834	825	811	793	–
		L/s	–	–	799	788	756	718	683	650	611	–

*Air delivery values are based on operating voltage of 400–v, wet coil, without filter or electric heater. Deduct filter and electric heater pressure drops to obtain static pressure available for ducting.

NOTES: 1. Do not operate the unit at a cooling airflow that is less than 350 cfm for each 12,000 Btuh (165 L/s for each 3.5 kW) of rated cooling capacity. Evaporator coil frosting may occur at airflow below this point.

2. Dashes indicate portions of table that are beyond the blower motor capacity or are not recommended.

50GL--A

Filter Pressure Drop (IN. W.C.) (Pa)

FILTER SIZE in.	CFM																			
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
20X20X1	0.05	0.07	0.08	0.10	0.12	0.13	0.14	0.15	—	—	—	—	—	—	—	—	—	—	—	—
20X24X1	—	—	—	—	0.09	0.10	0.11	0.13	0.14	0.15	0.16	—	—	—	—	—	—	—	—	—
24X30X1	—	—	—	—	—	—	—	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	
FILTER SIZE mm	L/s																			
	236	283	330	378	425	472	519	566	614	661	707	755	802	850	896	944	991	1038	1085	
508X508X25	12.4	17.4	19.9	24.9	29.9	32.3	34.8	37.3	—	—	—	—	—	—	—	—	—	—	—	—
508X610x25	—	—	—	—	22.4	24.9	27.4	32.3	34.8	37.4	39.9	—	—	—	—	—	—	—	—	—
610X762x25	—	—	—	—	—	—	—	17.4	19.9	22.4	24.9	27.4	29.9	32.3	34.8	37.3	39.8	42.3	44.6	

Accessory Electric Heat Pressure Drop IN. W.C. (Pa)

HEATER kW	CFM								
	600	800	1000	1200	1400	1600	1800	2000	2200
6.5 – 17.4	0.030	0.033	0.037	0.042	0.047	0.052	0.060	0.067	0.075
	L/s								
	283	378	472	569	661	755	850	944	1038
	7.5	8.2	9.2	10.4	11.7	12.9	14.9	16.7	18.7

50GL--A

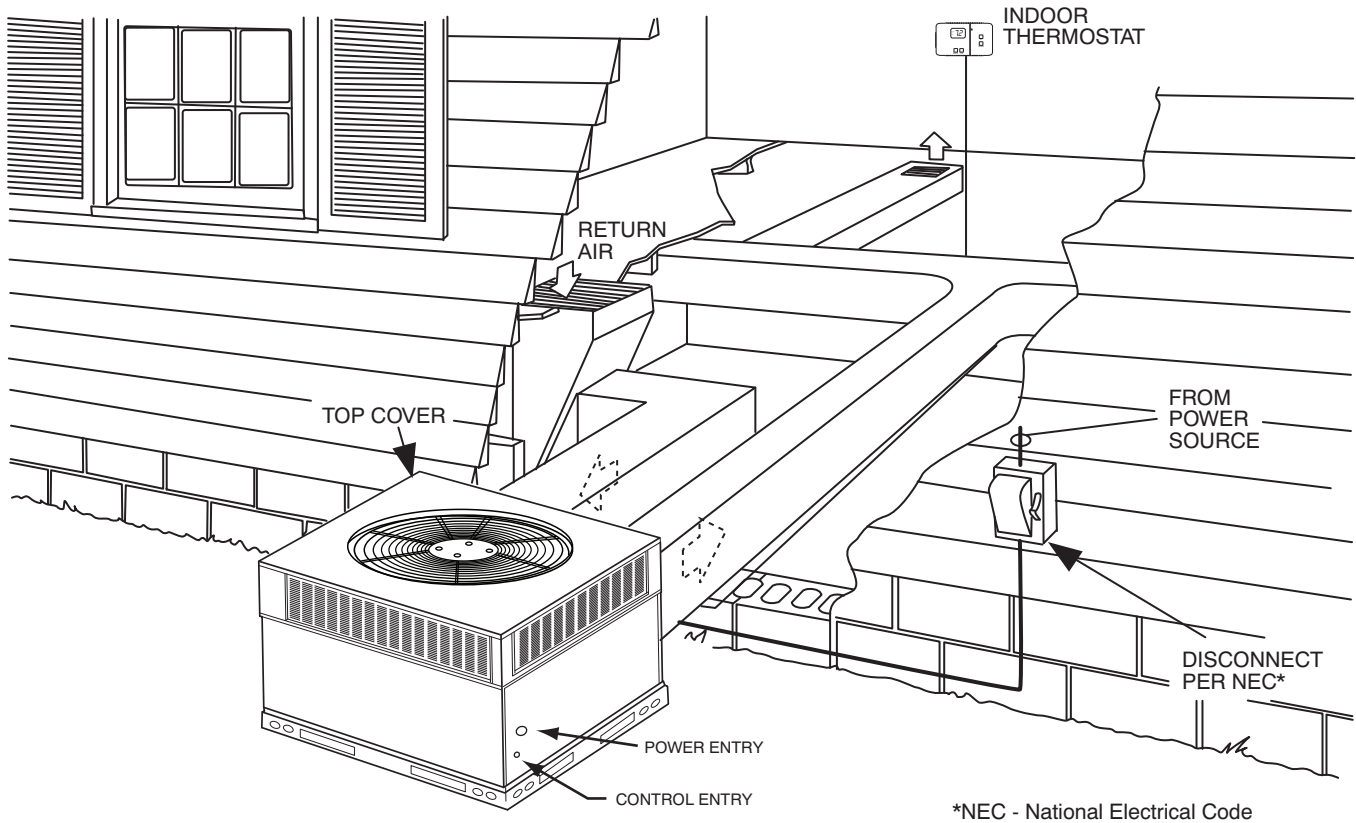
SUPERHEAT CHARGING TABLE (SUPERHEAT °C AT LOW-SIDE SERVICE PORT)																REQUIRED SUCTION TUBE TEMPERATURE °C (MEASURED AT LOW-SIDE SERVICE PORT)										
OUTDOOR TEMP. (°C)	ENTERING EVAPORATOR AIR °C WB															SUPERHEAT TEMP. (°C)	SUCTION PRESSURE AT SERVICE PORT (kPa)									
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		743	774	805	836	869	902	957	971	1005	
13	5.0	6.7	7.8	9.4	11.1	11.9	12.8	14.4	16.1	17.8	19.4	20.6	22.2	23.3	25.0	0	1.7	2.8	3.9	5.0	6.1	7.2	8.3	9.4	10.6	
16	3.9	5.6	6.7	8.3	10.0	10.8	11.7	13.3	15.0	16.7	18.3	20.0	21.1	22.2	23.9	1	2.8	3.9	5.0	6.1	7.2	8.3	9.4	10.6	11.7	
18	-	3.3	5.6	7.2	8.9	9.7	10.6	11.7	13.3	15.0	16.7	18.3	20.0	21.1	22.8	2	3.9	5.0	6.1	7.2	8.3	9.4	10.6	11.7	12.8	
21	-	-	3.9	5.6	7.2	8.1	8.9	10.6	11.7	13.3	15.0	16.7	18.3	20.0	21.7	3	5.0	6.1	7.2	8.3	9.4	10.6	11.7	12.8	13.9	
24	-	-	-	3.3	5.0	5.8	6.7	8.3	10.0	11.7	7.8	15.6	17.2	18.9	20.6	4	6.1	7.2	8.3	9.4	10.6	11.7	12.8	13.9	15.0	
27	-	-	-	-	2.8	3.6	4.4	6.7	8.3	10.0	11.7	13.9	15.6	17.2	19.4	6	7.2	8.3	9.4	10.6	11.7	12.8	13.9	15.0	16.1	
29	-	-	-	-	-	-	-	4.4	6.1	8.3	10.6	12.2	14.4	16.7	18.3	7	8.3	9.4	10.6	11.7	12.8	13.9	15.0	16.1	17.2	
32	-	-	-	-	-	-	-	2.8	5.0	7.2	8.9	11.1	13.3	15.0	17.2	8	9.4	10.6	11.7	12.8	13.9	15.0	16.1	17.2	18.3	
35	-	-	-	-	-	-	-	-	3.3	5.6	7.8	10.0	12.2	13.9	16.1	9	10.6	11.7	12.8	13.9	15.0	16.1	17.2	18.3	19.4	
38	-	-	-	-	-	-	-	-	-	4.4	6.7	8.3	11.1	12.8	15.0	10	11.7	12.8	13.9	15.0	16.1	17.2	18.3	19.4	20.6	
41	-	-	-	-	-	-	-	-	-	2.8	5.0	7.2	9.4	12.2	14.4	11	12.8	13.9	15.0	16.1	17.2	18.3	19.4	20.6	21.7	
43	-	-	-	-	-	-	-	-	-	-	3.3	6.1	8.3	11.1	13.9	12	13.9	15.0	16.1	17.2	18.3	19.4	20.6	21.7	22.8	
46	-	-	-	-	-	-	-	-	-	-	-	4.4	7.8	10.0	12.8	13	15.0	16.1	17.2	18.3	19.4	20.6	21.7	22.8	23.9	
																14	16.1	17.2	18.3	19.4	20.6	21.7	22.8	23.9	25.0	
																16	17.2	18.3	19.4	20.6	21.7	22.8	23.9	25.0	26.1	
																17	18.3	19.4	20.6	21.7	22.8	23.9	25.0	26.1	27.2	
																18	19.4	20.6	21.7	22.8	23.9	25.0	26.1	27.2	28.3	
																19	20.6	21.7	22.8	23.9	25.0	26.1	27.2	28.3	29.4	
																20	21.7	22.8	23.9	25.0	26.1	27.2	28.3	29.4	30.6	
																21	22.8	23.9	25.0	26.1	27.2	28.3	29.4	30.6	31.7	
																22	23.9	25.0	26.1	27.2	28.3	29.4	30.6	31.7	32.8	

50ES500443 - 2.0

A09336

Fig. 2 - Cooling Charging Chart

TYPICAL PIPING AND WIRING



*NEC - National Electrical Code

A09098

APPLICATION DATA

Condensate trap — A 2-in. (51 mm) condensate trap must be field supplied.

Ductwork — Secure downflow discharge ductwork to roof curb. For horizontal discharge applications, attach ductwork to unit with flanges.

To convert a unit to downflow discharge — Units are equipped with factory sealed covers in the downflow openings.

Maximum cooling airflow — To minimize the possibility of condensate blow-off from the evaporator, airflow through the units should not exceed 450 cfm per ton (60 l/s per kW).

Minimum cooling airflow — Minimum cooling airflow is 350 cfm per ton (46.8 l/s per kW).

Minimum ambient cooling operation temperature — All standard units have a minimum ambient operating temperature of 40°F (4°C). With accessory low ambient temperature kit, units can operate at temperatures down to 0°F (-17°C).

ELECTRICAL DATA

UNIT	NOMINAL	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	ELECTRIC HEAT		POWER SUPPLY	
		MIN	MAX	RLA	LRA	FLA	FLA	NOMINAL kW	FLA	MCA	MOCP
50GL-A24-E-90	400–3–50	380	420	4.5	32.0	0.8	1.1	—	—	7.5	15
								6.5	9.4	13.1	15
								8.7	12.6	12.1	20
50GL-A30-E-90	400–3–50	380	420	5.2	35.0	0.8	1.7	—	—	9.0	15
								6.5	9.4	13.9	15
								8.7	12.6	17.9	20
50GL-A36-E-90	400–3–50	380	420	6.5	46.0	0.8	2.0	13.0	18.8	25.6	30
								—	—	10.9	15
								6.5	9.4	14.3	15
50GL-A48-E-90	400–3–50	380	420	6.7	50.0	1.3	3.9	8.7	12.6	18.3	20
								13.0	18.8	26.0	30
								—	—	13.6	20
								6.5	9.4	16.6	20
								8.7	12.6	20.6	25
								13.0	18.8	28.4	30
								17.4	25.1	36.3	40

LEGEND

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

MOCP – Maximum Overcurrent Protection

RLA – Rated Load Amps

NOTES:

1. In compliance with NEC (National Electrical Code) requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be Power Supply fuse. The CGA (Canadian Gas Association) units may be fuse or circuit breaker.

2. Minimum wire size is based on 60 C copper wire. If other than 60 C wire is used, or if length exceeds wire length in table, determine size from NEC.

1. Unbalanced 3-Phase Supply Voltage

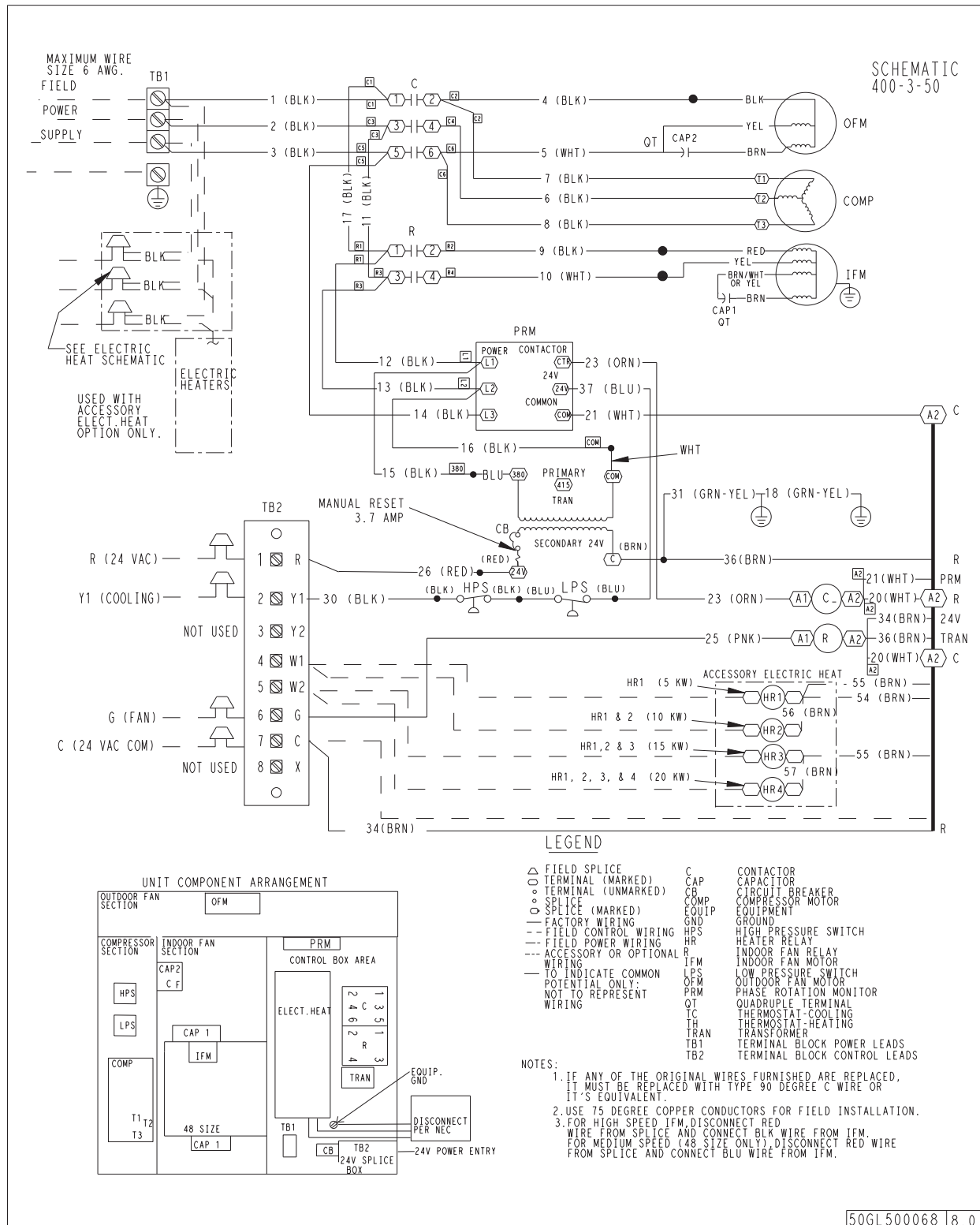
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

% Voltage imbalance

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

TYPICAL WIRING SCHEMATIC 400-3-50



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CONTROLS

Operating sequence

Cooling — When the system thermostat calls for cooling, 24 V is supplied to the “Y” and “G” terminals of the thermostat. This completes the circuit to the contactor coil (C) and indoor (evaporator) fan relay (IFR). The normally open contacts of energized C close and complete the circuit through compressor motor (COMP) to outdoor (condenser) fan motor (OFM). Both motors start instantly. The set of normally open contacts of energized IFR close and complete the circuit through IFM. The IFM starts instantly.

On the loss of the thermostat call for cooling, 24 V is removed from both the “Y” and “G” terminals (provided the fan switch is in the “AUTO” position) de-energizing the compressor contactor and opening the contacts supplying power to compressor/OFM. After a 90-second delay, the IFM shuts off. If the thermostat fan selector switch is in the “ON” position, the IFM will run continuously. For the 460 V units there is a step down autotransformer supplying 230 V to the Indoor Fan Motor.

NOTE: On units with a Time Guard® II device: Once the compressor has started and then stopped, it cannot be restarted again until 5 minutes have elapsed.

Heating — If accessory electric heaters are installed, on a call for heat, circuit R-W is made through the thermostat contacts. Circuit R-G is made which energizes the IFR. If the heaters are staged, then the thermostat closes a second set of contacts (W2) when second stage is required. When thermostat is satisfied, contacts open, deenergizing the heater relay and the IFR.

GUIDE SPECIFICATIONS

Single-Packaged Air Conditioner System

Constant Volume Application

HVAC Guide Specifications

Size Range: **2 to 4 Tons, Nominal Cooling**

Model Number: 50GL-A

Part 1 — General

SYSTEM DESCRIPTION

Outdoor rooftop mounted or ground mounted, electric cooling unit utilizing a hermetic scroll compressor for cooling duty. Unit shall discharge supply air vertically or horizontally as shown on contract drawings. Condenser fan/coil section shall have a draw-thru design with vertical discharge for minimum sound levels.

QUALITY ASSURANCE

B. Unit shall be tested in accordance with AHRI Standards 210/240 and 270.

C. Unit shall be designed in accordance with UL Standard 1995 and IEC 60335-1.

D. Roof curb shall be designed to conform to NRCA Standards.

E. Insulation and adhesives shall meet NFPA 90A requirements for flame spread and smoke generation.

F. Cabinet insulation shall meet ASHRAE Standard 62P.

DELIVERY, STORAGE AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

Part 2 — Products

EQUIPMENT

A. General:

Factory-assembled, single-piece, heating and cooling unit. Contained within the enclosure shall be all factory wiring, piping, controls, refrigerant charge with R-410A refrigerant, and special features required prior to field start-up.

B. Unit Cabinet:

1. Unit cabinet shall be constructed of phosphated, zinc-coated, pre-painted steel capable of with-standing 500 hours in salt spray.
2. Normal service shall be through a single removable cabinet panel.
3. The unit shall be constructed on a rust resistant unit base that has an externally trapped, integrated sloped drain.
4. Evaporator fan compartment top surface shall be insulated with a minimum 1/2-in. (12.7 mm) thick, flexible fiberglass insulation, coated on the air side and retained by adhesive and mechanical means. The evaporator wall sections will be insulated with a minimum semi-rigid foil-faced board capable of being wiped clean. Aluminum foil-faced fiberglass insulation shall be used in the entire indoor air cavity section.
5. Unit shall have a field-supplied condensate trap.

C. Fans:

1. The evaporator fan shall be direct-drive multi-speed motor and control, as shown on equipment drawings.
2. Fan wheel shall be made from steel, be double-inlet type with forward curved blades with corrosion resistant finish. Fan wheel shall be dynamically balanced.
3. Condenser fan shall be direct drive propeller type with aluminum blades riveted to corrosion resistant steel spiders, be dynamically balanced, and discharge air vertically.

D. Compressor:

1. Fully hermetic compressors with factory-installed vibration isolation.
2. Scroll compressors shall be standard on all units.

E. Coils:

Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed. Tube sheet openings shall be belled to prevent tube wear.

F. Refrigerant Components:

Refrigerant expansion device shall be of the fixed orifice type.

G. Filters:

Filter section shall consist of field-installed, throwaway, 1-in. (25 mm) thick fiberglass filters of commercially available sizes.

H. Controls and Safeties:

1. Unit controls shall be complete with a self-contained low voltage control circuit.
2. Compressors shall incorporate a solid-state compressor protector that provides reset capability.

I. Operating Characteristics:

1. Unit shall be capable of starting and running at 125°F (51°C) ambient outdoor temperature (except 48 size shall be capable of starting and running at 115° F (46°C)
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C) ambient outdoor temperature.
3. Units shall be provided with fan time delay to prevent cold air delivery before the heat exchanger warms up.

J. Electrical Requirements:

All unit power wiring shall enter the unit cabinet at a single location.

K. Motors:

1. Compressor motors shall be of the refrigerant-cooled type with line-break thermal and current overload protection.
2. All fan motors shall have permanently lubricated bearings, and inherent, automatic reset, thermal overload protection.

L. Special Features:

1. Thermostat:
To provide for one-stage heating and cooling in addition manual or automatic changeover and indoor fan control.
2. Crankcase Heater:
Shall provide anti-floodback protection for low-load cooling applications.
3. Electric Heaters:
 - a. Electric heater shall be available as a field-installed option.
 - b. Heater elements shall be open wire type, adequately supported and insulated with ceramic bushings.
 - c. Electric heater packages must provide single point power connection capability.

50GL-A

GUIDE SPECIFICATIONS (CONT)

4. Filter Rack Kit:
Shall provide filter mounting for downflow applications.
5. Flat Roof Curb:
Curbs shall have seal strip and a wood nailer for flashing and shall be installed per manufacturer's instructions.
6. Low Ambient Package:
Shall consist of a solid-state control and condenser coil temperature sensor for controlling condenser-fan motor operation, which shall allow unit to operate down to 0°F (17.7°C) outdoor ambient temperature when properly installed.
7. Manual Outdoor Air Damper:
Package shall consist of damper, birdscreen, and rainhood which can be preset to admit outdoor air for year-round ventilation.
8. Square-To-Round Duct Transitions (24-48 size):
Shall have the ability to convert the supply and return openings from rectangular to round.
9. Time Guard II
Automatically prevents the compressor from restarting for at least 4 minutes and 45 seconds after shutdown of the compressor. Not required when a corporate programmable thermostat is applied.